



2(FA)395(TS)



Synchronizing Brigade Counterfire and Close Supporting Fires “A WAY”



MDMP



The BDE battle staff and targeting team must develop the Counterfire EFST beginning with Mission Analysis and continuing throughout MDMP. During IPB the S2 must identify the composition of the Regimental Artillery Group facing the Brigade. Once this has been determined the staff determines the number of enemy tubes that must be attrited to enable the brigade to achieve fire superiority over the RAG or at a minimum achieve a force ratio of 1:1.

This applies to a BDE w/ a "R" BN if you need to shift them to close fires at a critical time.



Mission Analysis



- The BDE FSO submits to BDE Commander during MA Brief for approval:
 - DRAFT CTR FIRE EFSTs
 - Proposed Radar Zone Priorities and allocation
- Receives Commander's Guidance for Fires
- Issues WARNO to GS/GSR/RFA BN and TF FSO
 - BDE Restated mission
 - Commander's Guidance for fires
 - Draft CTRFIRE EFSTs
 - Radar zone priorities and allocations



COA DEVELOPMENT(1-2)



- During COA development the staff develops by phase:
 - Develops and refines method of CTRFIRE EFST
 - Radar Zones
 - Cueing guidance
 - Volume of fire
 - FA positioning
 - The initial method is focused on attrition of enemy tubes employing the largest number of fire units available devoted to counterfire until an initial endstate and decision point is reached.



COA DEVELOPMENT(2-2)



- Cross talk with GS/GSR/RFA BN S2/S3 Critical
 - Coordinate radar positions
 - Coordinate FA positioning requirements
 - Coordinate Cueing Guidance
- Multiple Counterfire EFSTs required for success
- Synchronize Counterfire/Close Support/Deep Fires
- Develop initial Radar Zone locations and execution matrix



WARGAME



- REFINE and DISTRIBUTE:
 - Counterfire EFSTs
 - Radar Zone locations
 - Radar Zone execution matrix
- COORDINATE with FA BN S2/S3:
 - FA position areas
 - Radar Movement Plan
 - Cueing guidance
- DISTRIBUTE to TF FSO/FA BN:
 - Completed CTRFIRE EFST
 - Radar Zone Execution Matrix
 - Cueing guidance



Synchronize CTRFIRE EFSTs with Close Support and Deep Fires



- The BDE staff must synchronize the counterfire fight with close supporting fires and deep fires.
 - If not synchronized competing EFSTs will degrade effects or cause EFST failure
 - BDE unable to focus fires
- The FSE must track and assess the execution of the CTRFIRE EFST and determine if the endstate is met.
 - Endstate met
 - Execute next EFST
 - If not met
 - Continue execution of current EFST
 - Modify method
 - Modify endstate
 - Execute next EFST

Notify
FSCOORD

And BDE Battle
CPT



EFST Assessment



EFST ASSESSMENT

TASK: _____
ENDSTATE: _____

☐

TASK: _____
ENDSTATE: _____

☐

TASK: _____
ENDSTATE: _____

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TASK: _____
ENDSTATE: _____

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TASK: _____
ENDSTATE: _____

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TASK: _____
ENDSTATE: _____

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TASK: _____
ENDSTATE: _____

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TASK: _____
ENDSTATE: _____

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TASK: _____
ENDSTATE: _____

☐

TASK: _____
ENDSTATE: _____

☐

- **GREEN:** EFST EXECUTED, ENDSTATE ACHIEVED
- **AMBER:** EFST EXECUTED, NO BDA
- **RED:** EFST EXECUTED, ENDSTATE NOT MET/REEVALUATE METHOD/NOTIFY FSCOORD
- **BLACK:** EFST NOT EXECUTED/NOTIFY FSCOORD

Cross talk with
FSCOORD Critical



BATTLE COMMAND COUNTERFIRE



CHEMO

FSO

S2

XO

- Could it be chemical?
- Will BTRYs be affected?
- Radar affected?

QUESTIONS/GUIDANCE

BTL CPT

- Incoming reported by TF's?
- Operational Phase
- Impact on friendly?

- Endstate Assessment
- Are we in range?
- Ammo needed to range
- Predicted Analysis/BDA
- CFZ management, Current radar zones effective?
- Identify Weapons systems
- Change Method?
- Cueing guidance effective?

FSO

- Who's firing: mortars, 2s1, 2s19, 2s5, or BM21?
- Firing location
- Phase of fires, focus?
- Force Ratio assessment?



DEVELOPING THE COUNTERFIRE EFST “A WAY”



The primary tools used to synchronize the Counterfire EFST with the Brigade's Close Support and Deep Fires EFSTs are:

- Commander's guidance
- Radar Zones
- Cueing Guidance



Counterfire EFST



- Unlike other EFSTs the Counterfire Fight will extend across all Phases of the Brigade's Operation and must be fought in conjunction with the Brigade's Close Support and Deep Fights

How does the Brigade shift focus from Counterfire to the Close or Deep Fight?

Battlefield Calculus!



Counterfire EFST



- Multiple Counterfire EFST may be required to address each phase of the battle. Based on the Brigade's phase of the operation, predicted analysis of counterfire execution and assessment of the Counterfire EFST:
 - The method may be adjusted
 - Radar zones modified or deleted
 - Cueing guidance modified
 - Tasks and Purpose changed
 - Endstate modified
-
- In order to transition the focus of fires from a Counterfire EFST to a Close Support EFST you must:
 - Develop and manage radar zones
 - Develop and manage cueing guidance
 - Develop multiple Counterfire EFSTs



Counterfire EFST



- Initially, focus the maximum number of platoons massing on Counterfire Targets. Once we have reduced the enemy RAG to a level that enables the GS/GSR/RFA BN to suppress it; then the method is changed to employ the fewest number of fire units in support of the counterfire fight and a maximum number of platoons focused on Close Supporting Fires. In order to be able to decrease the number of platoons focused on counterfire certain conditions must be met.
 - RAG Attrited to a minimum of 1:1 force ratio to the GS/GSR/RFA BN prior to execution of Close Support EFST
 - Cueing guidance and radar zones must support transition.
- Initially maximum number of CFZ and CFFZ to attrit the RAG once we achieve an endstate or a trigger to shift to the Close Fight then radar zones are reduced to the absolute minimum critical CFZs. All CFFZs are inactivated.



Counterfire EFST



TASK: Neutralize Divisional RECON Strike Complex

PURPOSE: Defeat Divisional Recon Assets in TF X-X Sector

ENDSTATE: 12x2S5 tubes destroyed prior to arrival of REGT RECON in Sector.



Counterfire EFST



TASK: Neutralize Regimental RECON Strike Complex

PURPOSE: Defeat MRR RECON in TF X-X Sector and Atritt RAG

ENDSTATE: 12x2S1 Tubes Destroyed



Counterfire EFST



TASK: Suppress RAG

PURPOSE: Disrupt Movement of CRP and FSE
into TF X-X Sector

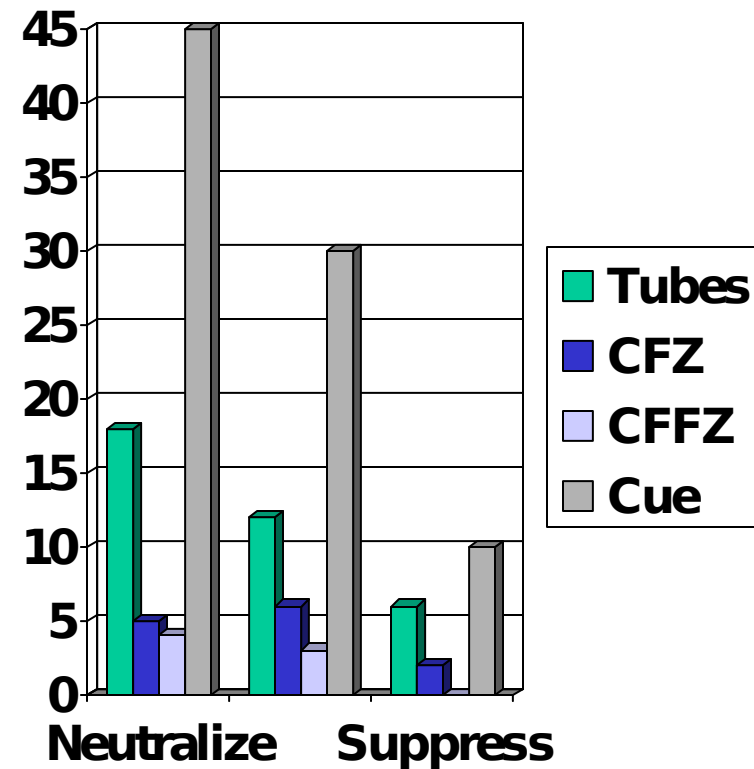
ENDSTATE: 12x2S19 Tubes Destroyed



Defense CTRFIRE EFST



- As counterfire endstates are met during each phase of the battle the method changes
- As the focus transitions from the Counterfire fight to the Close fight the counterfire task also transitions
- Counterfire endstates change by phase as conditions set by previous execution
- Radar zones and cueing guidance change by phase





WHAT DO I HAVE TO DO?



MISSION: DEFEND

BRIGADE COMMANDER:

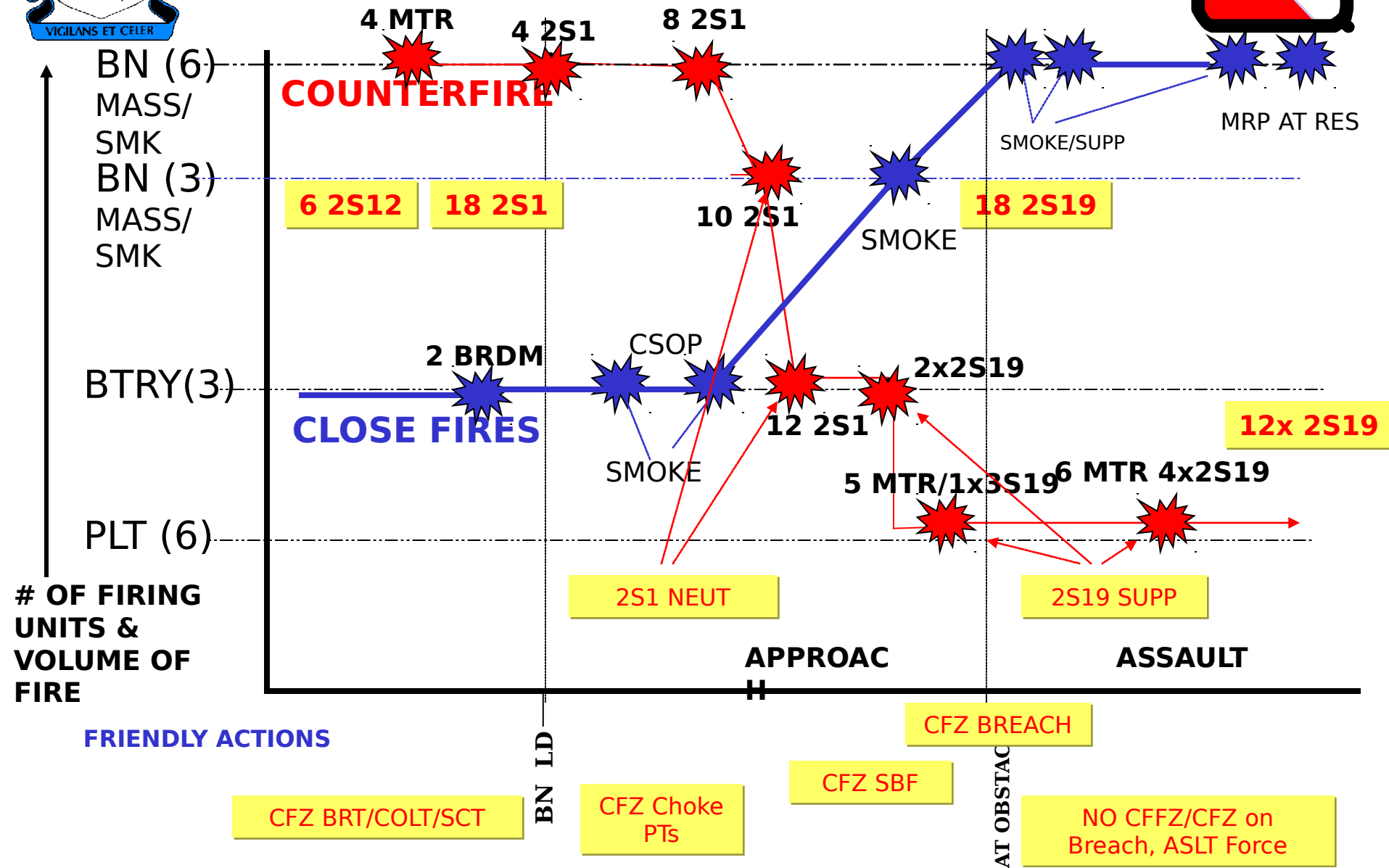
1. "PREVENT HIS ARTILLERY FROM TAKING DOWN MY COMBAT POWER"
2. "TAKE DOWN THE FSE, AGMB, AND HURT HIS MRBs"

ARTILLERY TRANSLATION:

<u>TASK</u>	<u>ENDSTATE</u>
1. NEUTRALIZE THE RAG	EFFECTS = 18x2S19, 12x2S1
2. NEUTRALIZE THE FSE	EFFECTS = 2 BMPs
3. NEUTRALIZE THE AGMB	EFFECTS = 8 BMPs
4. NEUTRALIZE MRBs	EFFECTS = 10 BMPs/MRB



BEER MATH OVER TIME





COUNTERFIRE EFST



ENDSTATE: DESTROY 18 x 2S19 HOWITZERS
(ASSUMING AN EFFECTIVE COUNTERFIRE DRILL)

<u>METHOD</u>	<u>EFFECTS</u>	<u># OF MISSIONS REQUIRED</u>	<u># OF ROUNDS REQUIRED</u>
BN 6 HEF	4 X TUBES	4 1/2 MISSIONS	486 HEF
BN 3 HEF	2 X TUBES	9 MISSIONS	486 HEF
BN 1 HEF	1 X TUBES	18 MISSIONS	324 HEF
BTRY 3 HEF	1 X TUBES	18 MISSIONS	324 HEF
PLT 6 HEF	1 X TUBES	18 MISSIONS	324 HEF

QUESTION: IF WE DON'T EXPEND AMMO EARLY WILL WE WIN THE



Radar Zone Management



RADAR ZONES



RADAR ZONES



There are four types :

- **Critical friendly zone (CFZ)**
- **Call for fire zone (CFFZ)**
- **Artillery target intelligence zone (ATIZ)**
- **Censor zone (CZ)**



RADAR QUEUE PRIORITIZATION



- **Radar sorts target acquisitions in its target queue in priority of which zones the target violated:**
 - 1. CFZ
 - 2. CFFZ
 - 3. ATIZ
 - 4. NO ZONE



RADAR ZONE RULES



- **Up to nine zone can be entered into the radar. Zones can be of one type or any combination of zones.**
- **A zone is defined by a minimum of 3 grids, a maximum of 6 grids.**
- **Radar zones cannot intersect or touch each other**
- **No more than two zones can lie along the same search azimuth.**
- **Grid coordinates must be entered sequentially (Clockwise or counter-clockwise)**
- **All zones, except CFZs, must fall within the radar search sector.**
- **An azimuth cannot intersect the boundary of a zone more than two times.**

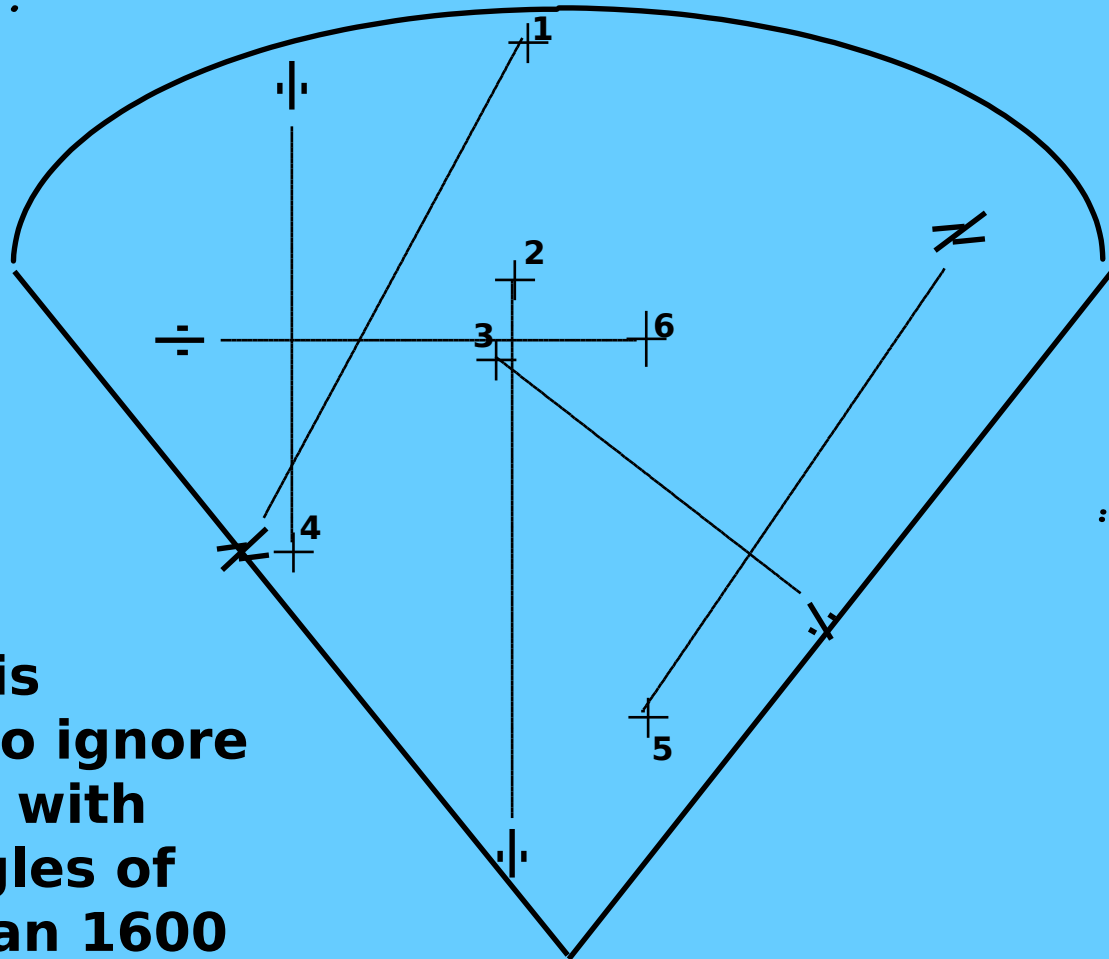


TRACKING CAPABILITIES & LIMITATIONS

ASPECT ANGLE



Aspect Angle: The angle between the radar antenna and the target path of the object



Detected?

1 - No

2 - No

3 - No

4 - Yes

5 - Yes

6 - 50/50

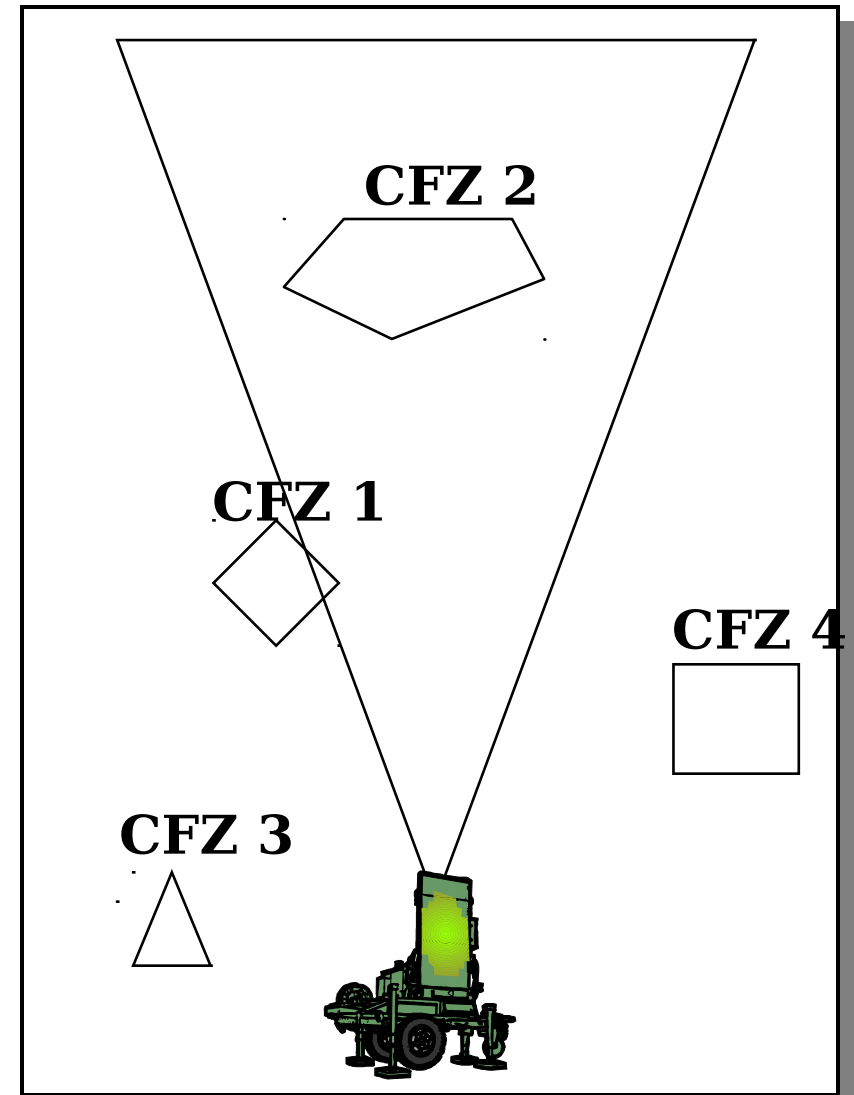
The radar is designed to ignore detections with aspect angles of greater than 1600 mils (its not



CRITICAL FRIENDLY ZONE (CFZ)



- A friendly unit or location which the Maneuver Commander designates as critical to achieving the mission.
- A round impacting in this zone will result in a FM:CFF, priority one, being sent to the FDC.
- Only point of origin is contained in the FM:CFF
- Zone can be located outside the radar's search sector.
- **NOT A FORCE FIELD**



CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

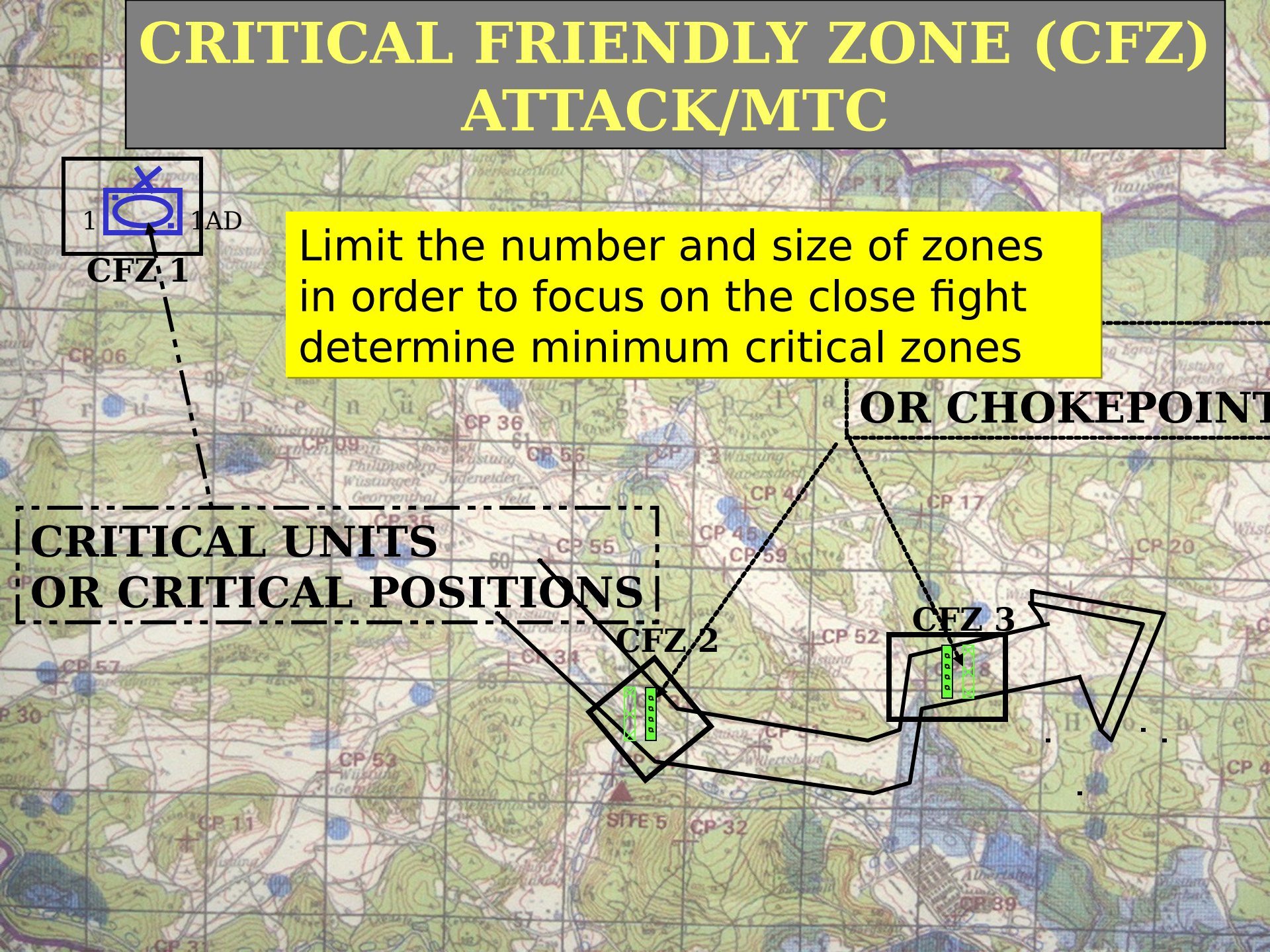
Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT



CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT

CP 06 CP 09 CP 36 CP 56 CP 12 CP 45 CP 59 CP 55 CP 34 CP 52 CP 17 CP 20 CP 4 CP 32 CP 39 CP 11 CP 30 CP 57 CP 53 CP 31 SITE 5

CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT

CP 06, CP 09, CP 36, CP 56, CP 12, CP 45, CP 59, CP 55, CP 34, CP 52, CP 17, CP 20, CP 4, CP 53, CP 11, CP 32, CP 39, CP 30, CP 31, SITE 5

CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT

CP 06 CP 09 CP 36 CP 56 CP 12 CP 45 CP 59 CP 55 CP 34 CP 52 CP 17 CP 20 CP 4 CP 53 CP 11 CP 32 CP 39 CP 30 CP 31 SITE 5

CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT

CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT

CRITICAL FRIENDLY ZONE (CFZ) ATTACK/MTC

1 1AD
CFZ 1

Limit the number and size of zones in order to focus on the close fight determine minimum critical zones

CRITICAL UNITS OR CRITICAL POSITIONS

CFZ 2

CFZ 3

OR CHOKEPOINT

CRITICAL FRIENDLY ZONE (CFZ) DEFENSE



CFZ 1

Limit the number of zones in order to focus on the close fight determine minimum critical zones



CFZ 2



CFZ 3

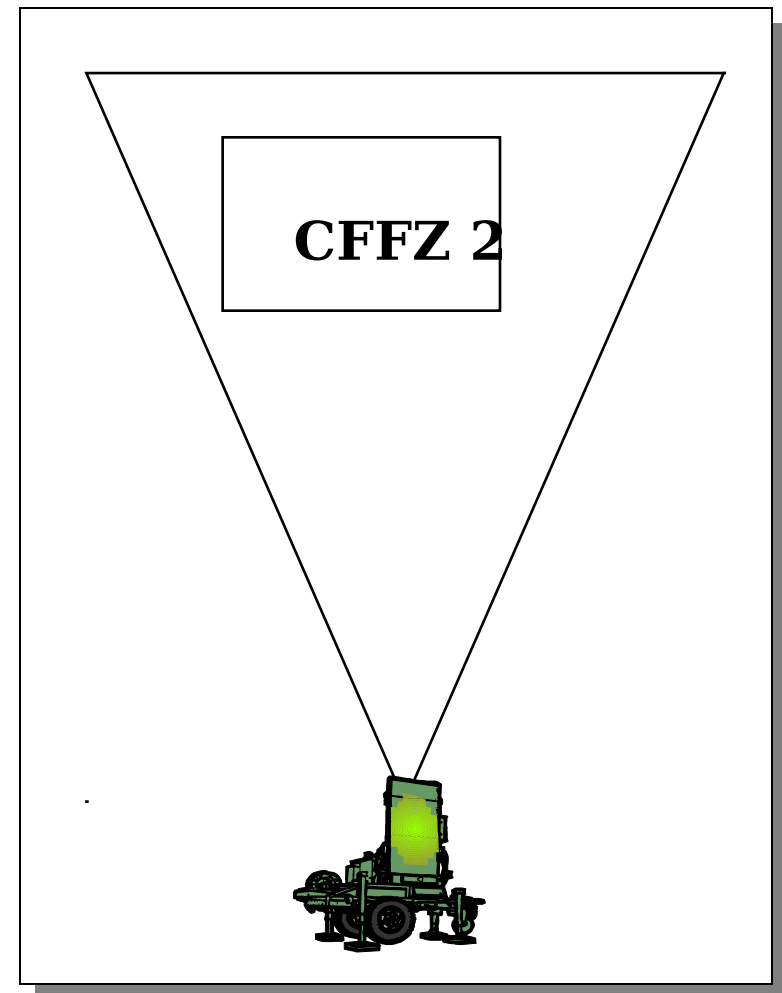
CRITICAL UNITS
OR CRITICAL POSITIONS



CALL FOR FIRE ZONE (CFFZ)



- An area considered a priority to identify/engage enemy indirect firing systems effects that are engaging friendly forces or affecting the area of operation.
- A weapon located in this zone will result in a FM:CFF, priority two, being sent to the FDC.
- Only point of origin is contained in the FM:CFF
- Zone must be located inside the radar's search sector
- Best when used to attack specific units OR specific weapon types.

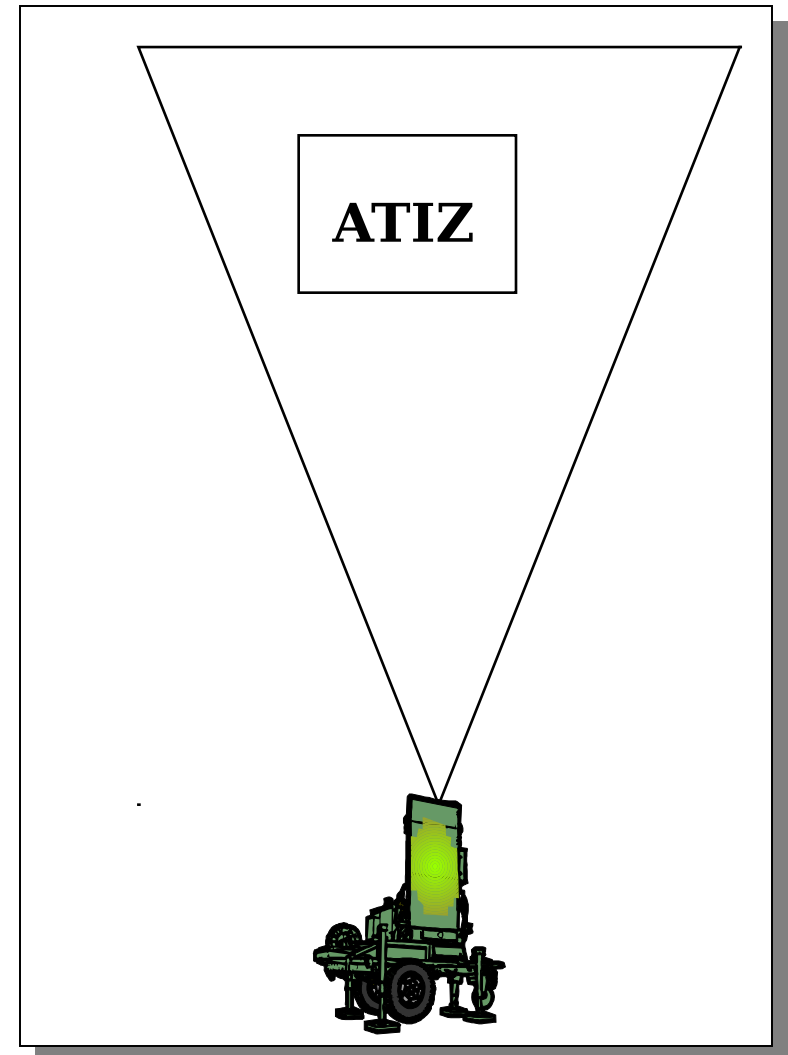




ARTILLERY TARGET INTELLIGENCE ZONE (ATIZ)



- **An area the Maneuver Commander wishes to closely monitor.**
 - **May be used to Prioritize Acquisitions that are not Priority 1 or 2 CFFs. May be used to develop next CFFZ.**
- A weapon located in this zone will result in an ATI:CDR being sent to the FDC.**
- **Point of origin, point of impact, and suspected weapon type is contained in the ATI:CDR**
 - **Zone must be located inside the radar's search sector**

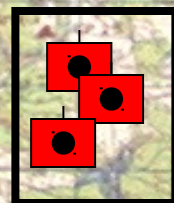


CALL FOR FIRE ZONE (CFFZ) ATIZ

Initial task: Attrit,
once endstate met
deactivate CFFZ.

In order to focus on
the close fight
eliminate all CFFZ

ATIZ 1



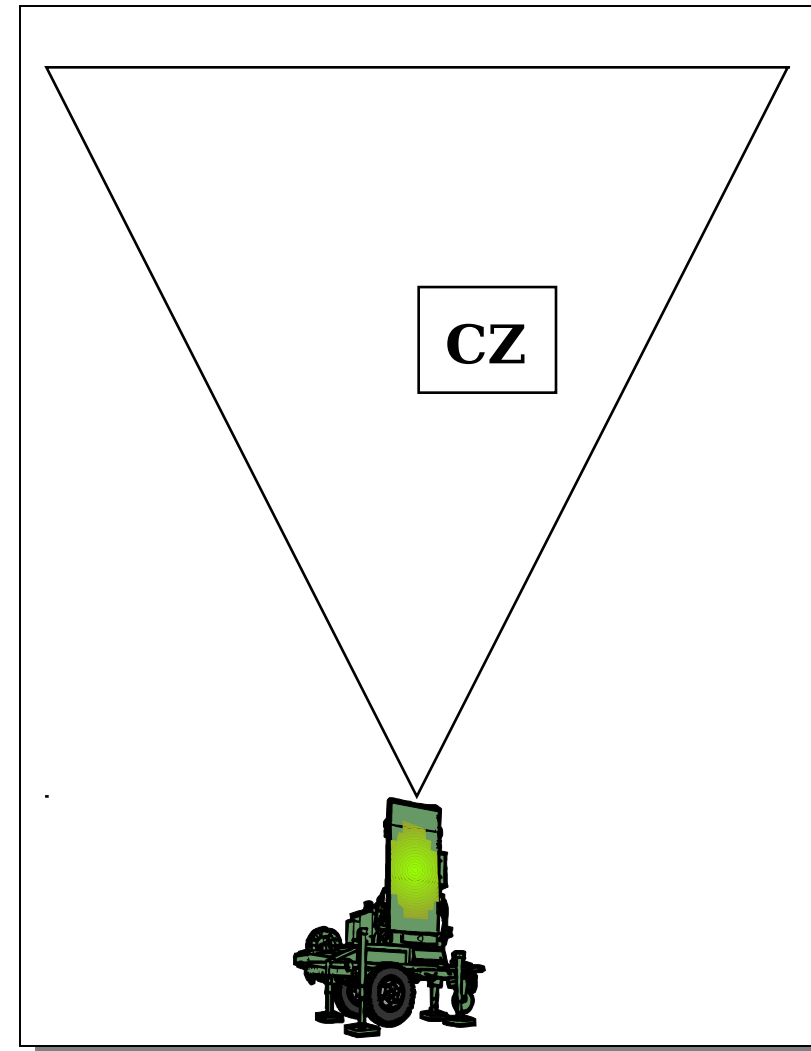
CFFZ 1



CENSOR ZONE (CZ)



- An area from which you wish to ignore all target detections.
- *Weapons that fire from this zone are not processed by the radar.*
- Zone must be located inside the radar's search sector.
- May be used as a Protective Measure for friendly indirect fire systems when FLOT is not Linear.





ZONE MANAGEMENT



- **Who is the zone manager? Who decides what zones go where? Who decides how many of what type of zones to use? Who tracks the zones?**
 - **TTP: BDE FSO = CFZs, Counterfire HQ/ S2 = CFFZ, CZ, & ATIZ**
- **Zone manager directs radar tech which zones to delete and which zones to add or change.**
- **If a 10th zone is entered into the radar the 1st zone is automatically rejected.**
 - **TTP: Delete old zone before entering a new zone.**
- **Zones and search sectors can be digitally submitted to the radar using SPRT:SEARCH and SPRT:FILTER messages.**
- **If changing zones via digital traffic always confirm via voice.**
- **Radar Deployment Order is used to establish zones.**



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DEVELOPING CUEING GUIDANCE



DEVELOPING CUEING GUIDANCE



- The selection of cueing guidance is the decision of the GS/GSR/RFA BN S3 based on recommendations of the GS/GSR/RFA BN S2 and the Brigade Targeting Officer. They are closely related to the development and management of radar zones and must meet the Task and Endstate of the Brigade's Counterfire EFST.
- Cueing Guidance should be planned and executed by Phase of the Brigade Operation.



DEVELOPING CUEING GUIDANCE



The intent of this matrix is to provide the GS/GSR/RFA BN S3 with a tool to select the appropriate cueing guidance based on the survival requirements of the radar based on accumulated radiation time vs. the requirements to acquire targets based on the BDE Counterfire task and endstate.



DEVELOPING CUEING GUIDANCE



- The S2 has multiple requirements to meet when selecting cueing schedules and cueing guidance for the Q36 radar.
 - Mission Requirements to meet Counterfire EFST
 - Close supporting fires against Counterfire requirements.
 - Survival of the radar



Counterfire vs. Close Support



- In order to shift focus of fires from counterfire to close supporting fires the GS/GSR/R FA BN must carefully manage its cueing guidance while remaining aware of electronic acquisition threats to the radar. One technique to focus the BN on close fires is to:
 - Limit the acquisition time of the radar. When the Regimental Artillery Group enters Phase III fires; a large volume of enemy fires will impact at the point of penetration. Limiting the radar's radiation time in conjunction with limiting radar zones in effect, will generate a high volume of acquisitions.



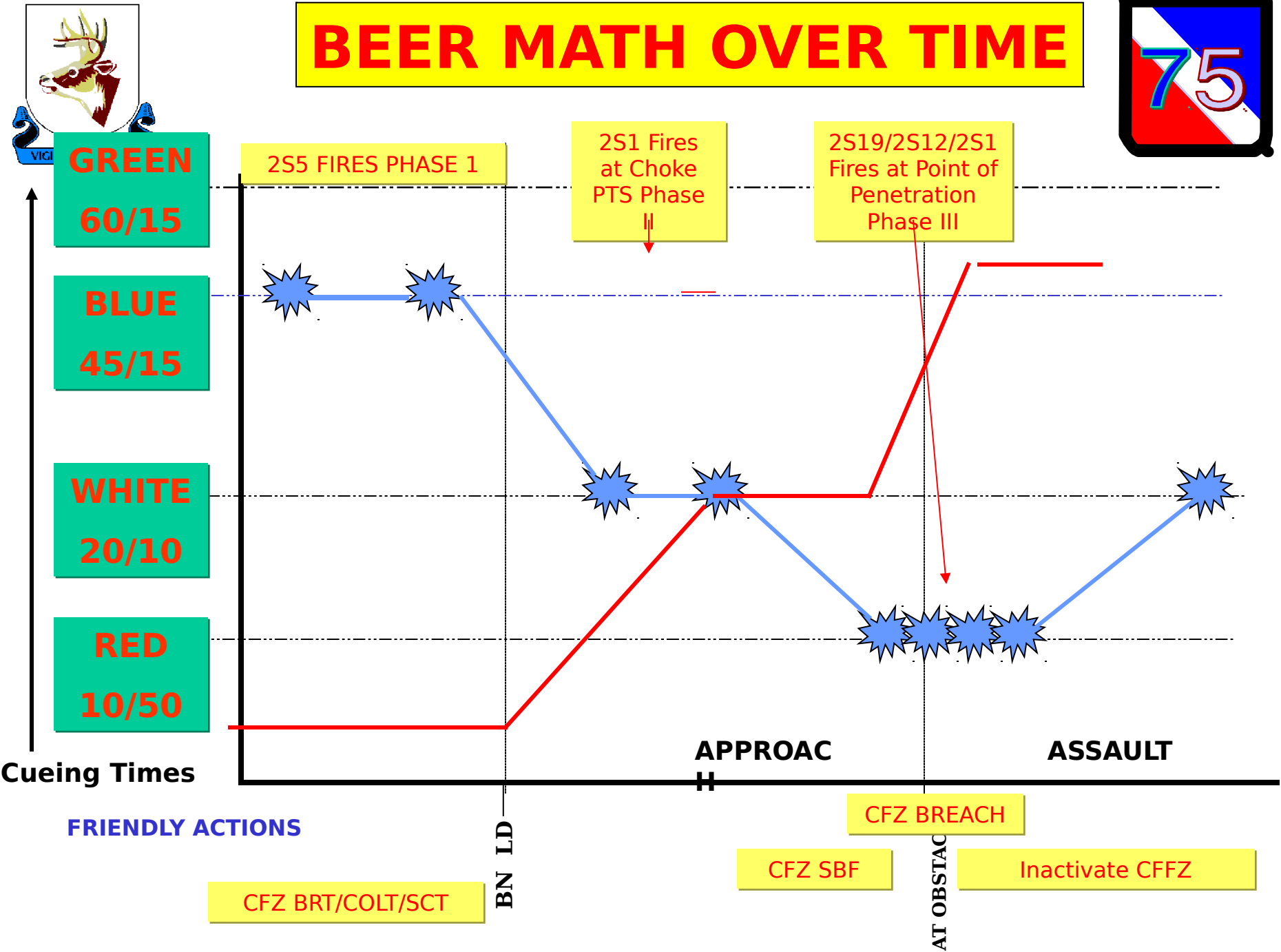
SELECTION MATRIX



		THREAT	NONE	LOW	MEDIUM	HIGH
Operational Phase	ACQUISITION TASK					
Recon/CTR Recon	Neutralize	Phase 1 Fires	BLACK*	GREEN 60/15	SITUATIONAL CUE WHITE 20/10	CMD CUE BLUE 45/15
Approach March	Neutralize	Phase2 Fires	GREEN 60/15	GREEN 60/15	SITUATIONAL CUE BLUE 45/15	SITUATIONAL CUE WHITE 20/10
Breach Obstacles/ Engagement Area Defense	Suppress	Phase 3 Fires	WHITE 20/10	WHITE 20/10	RED 10/50	RED 10/50
Actions on the Objective SeconGS/GSR/Ron/Sec onGS/GSR/Roff	Suppress	Phase4 Fires	BLUE 45/15	GREEN 60/15	SITUATIONAL CUE BLUE 45/15	SITUATIONAL CUE WHITE 20/10

*Continuous cueing

BEER MATH OVER TIME





Command Cueing



- Used when electronic threat to the radar is high or when low volume of fire are expected.
- Requires:
 - Dedicated Net
 - Cueing Agents, as close to the point of impact as possible



SITUATIONAL CUEING



- Used to limit accumulated radiation time
- Used when low volume of fires expected
- Tactical Trigger developed based on enemy or friendly actions to cue the radar



CTRFIRE EFAT



Phase I TASK	Neutralize Divisional RECON Strike Complex	Neutralize Regimental RECON Strike Complex
PURPOSE	Defeat Divisional Recon Assets in TF X-X Sector	Defeat MRR RECON in TF X-X Sector and Atritt RAG
METHOD	1. CMD Cue until DIV RECON in Sector 2. On CMD radiate for only 30sec 3. BRT TMs/_CO CMD/FIST/TF FSO Cueing Agent; Cueing net is BRIGADE O&I 4. Q36 operate on BRIGADE O&I @ 051800 Establish (V) with BRT TMs:_____, x-xxFA S2, BRIGADE S2. 5. Cueing Schedule RED from 2000-2300, then CMD CUE. After 4TA return to CMD CUE. 6. Minimum of 4xTA with Engagement $\leq$ 8 Minutes W/MLRS 7. 1/C/1-27FA Occupy PA____NLT 051800 8. CFZ 1, 2, 3, 4, 5, I/E on BRT Ops 9. CFZ 6 I/E BP1 10. CFZ 7 I/E TF TOC 11. Q36 in Position Able to Acquire to TA13Grid Line 12. ENG DIG-IN Q36 Primary/ALT Positions	1. CMD Cue until MRR RECON in Sector. 2. On CMD radiate for only 30sec 3. BRT TMs/_CO CMD/FIST/TF FSO Cueing Agent; Cueing net is BRIGADE O&I 4. Q36 operate on BRIGADE O&I @ 051800 Establish (V) with BRT TMs:_____, x-xxFA S2, BRIGADE S2. 5. Cueing Schedule RED from 0001-0300 after 4TA return to CMD CUE. 6. Minimum of 4xTA W/MLRS Displace to PA____, RTE____ 7. x-xxFA Occupy PA____NLT 051800, 8. Minimum of 4xCFZ Violations W/155mm Displace to PA____ RTE____ 9. All Engagements $\leq$ 8 Minutes 10. CFZ 1, 2, 3, 4, 5, I/E on BRT Ops 11. CFZ 6 I/E BP1 12. CFZ 7 I/E TF TOC 13. Q36 in Position Able to Acquire to TA13Grid Line
ENDSTAT E	12x2S5 tubes destroyed prior to arrival of REGT RECON in Sector.	18x2S1 Tubes Destroyed



CTRFIRE EFAT



TASK Suppress RAG

PURPOSE Disrupt Movement of CRP and FSE into
TF X-X Sector

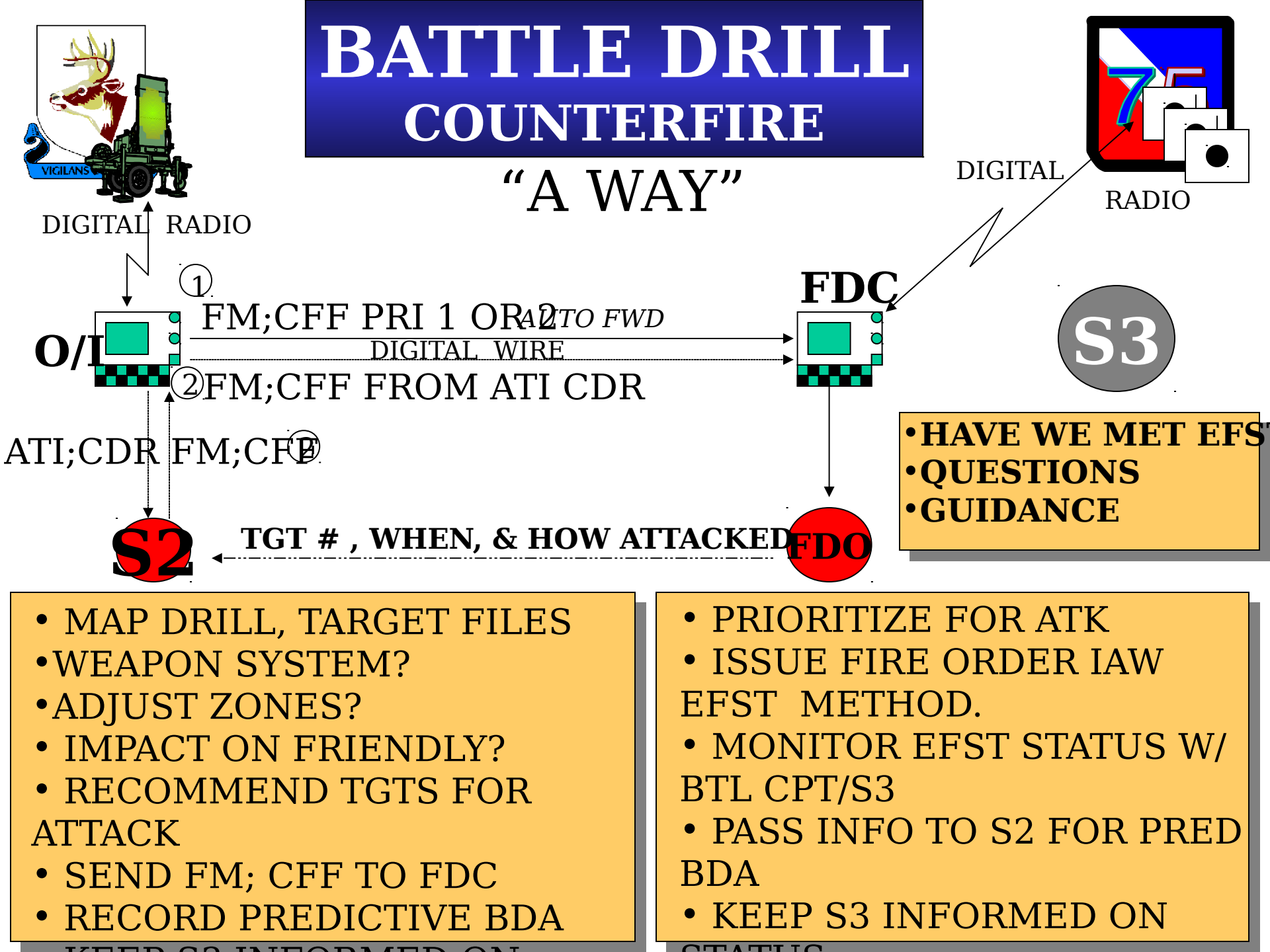
METHOD

1. CMD Cue until CRP in Sector or 1st RED RAIN
2. Cueing Schedule RED NLT 060800/Identification of AGMB CUE Schedule BLUE
3. Minimum of 4xTA W/**MLRS**. MLRS not available then first 2 TA 155mm responGS/GSR/Rwith BN 6 DPICM then change MOF to BTRY 3.
4. Minimum of 4xCFZ Violations W/**155mm BTRY 3rd Each TA**
5. Engagement $\leq$ 8 Minutes
6. CFZ 1, 2, 3, 4, 5, I/E on BRT Ops Until FSE Identified.
7. CFZ 6(BP1) 8(BP2) 9(BP3) I/E upon identification of FSE.
8. CFZ 7 I/E TF TOC
9. CFZ 9(RES)
- 10. NO CFFZ I/E On Identification of AGMB**
11. Q36 in Position Able to Acquire to _____
12. ENG DIG-IN Q36 Primary/ALT Positions

ENDSTATE 12x2S19 Tubes Destroyed

BATTLE DRILL COUNTERFIRE

"A WAY"



- MAP DRILL, TARGET FILES
- WEAPON SYSTEM?
- ADJUST ZONES?
- IMPACT ON FRIENDLY?
- RECOMMEND TGTS FOR ATTACK
- SEND FM; CFF TO FDC
- RECORD PREDICTIVE BDA

- PRIORITIZE FOR ATK
- ISSUE FIRE ORDER IAW EFST METHOD.
- MONITOR EFST STATUS W/ BTL CPT/S3
- PASS INFO TO S2 FOR PRED BDA
- KEEP S3 INFORMED ON